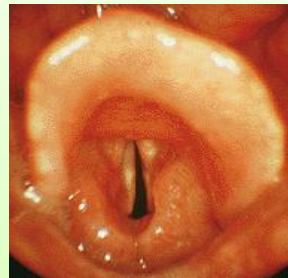


KEHLKOPFSCHLEIMHAUT, FIBROELASTISCHE MEMBRANE

Klinische Relevanz

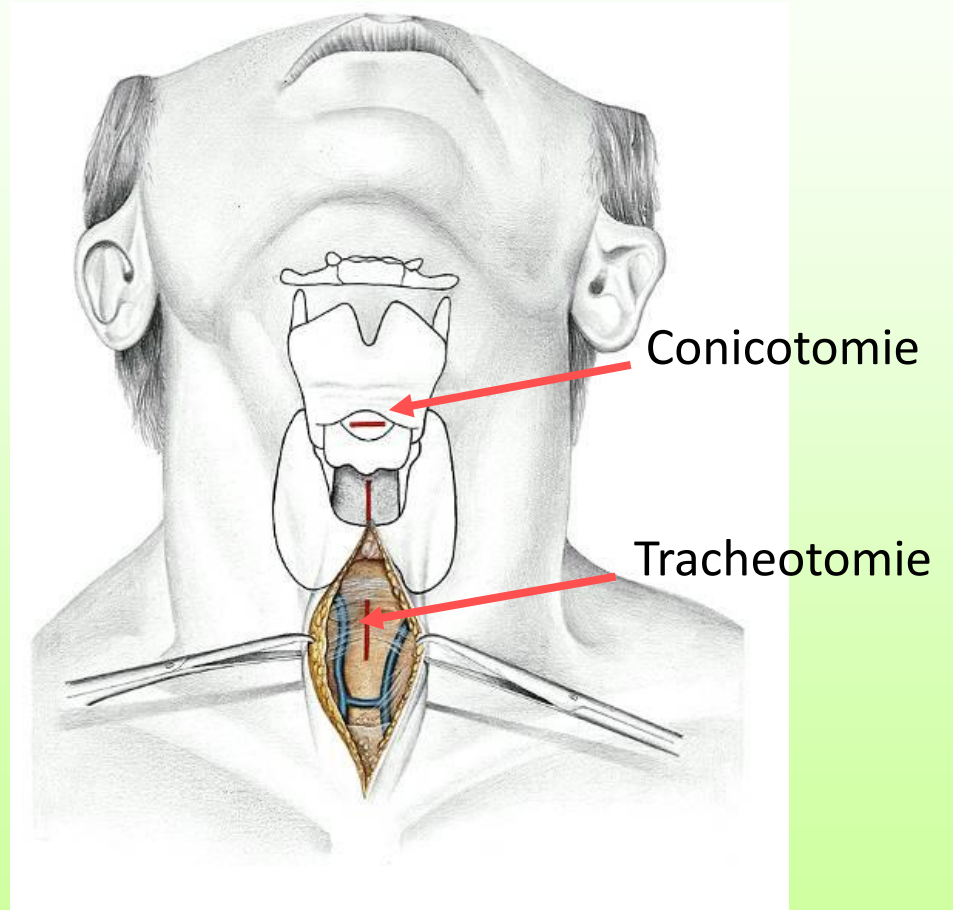
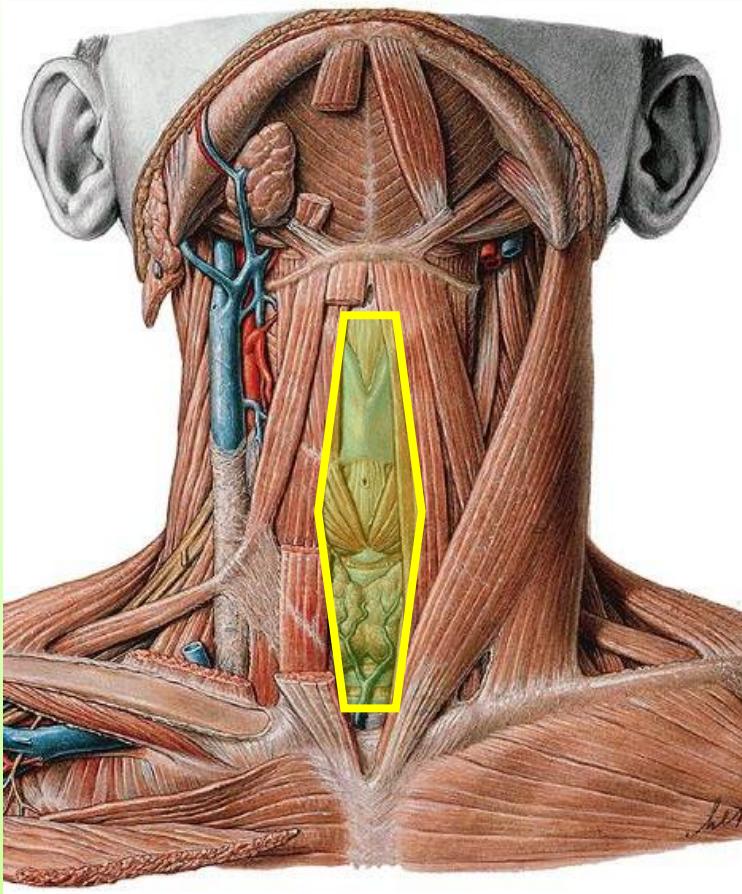


Dr. Andrea D. Székely

SEMMELWEIS UNIVERSITÄT

***Anatomisches, Histologisches und
Embryologisches Institut***

REGIO COLLI MEDIANA



VERSCHLUß DES KEHLKOPFEINGANGES BEIM SCHLUCKEN

Zungengrund-Kehldeckel-Mechanismus

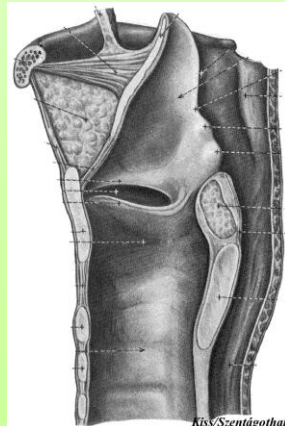
Kontraktion des Mundbodens
(Mm. mylohyoideus,
digastrici et thyrohyoidei)



Kehlkopf wird angehoben



Kehlkopfeingang nähert sich
an Kehldeckel



Fettkörper-Kehldeckel-Mechanismus

Rückführung des Zungengrundes



Fettkörper auf den Kehldeckel gedrückt

Kontraktion der Mm. aryepiglottici
et thyroepiglottici

Begünstigung des Absinkens des
Kehldeckels

VERSCHLUß DES KEHLKOPFEINGANGES BEIM SCHLUCKEN

NORMALE LAGE



Aditus laryngis wird
enger

mm. constrictor
pharyngis kontrahiert,
schliesst den Aditus von
hinten

Das palatum molle steigt
auf, schliesst den Rachen
nach oben

Reflex – n. X

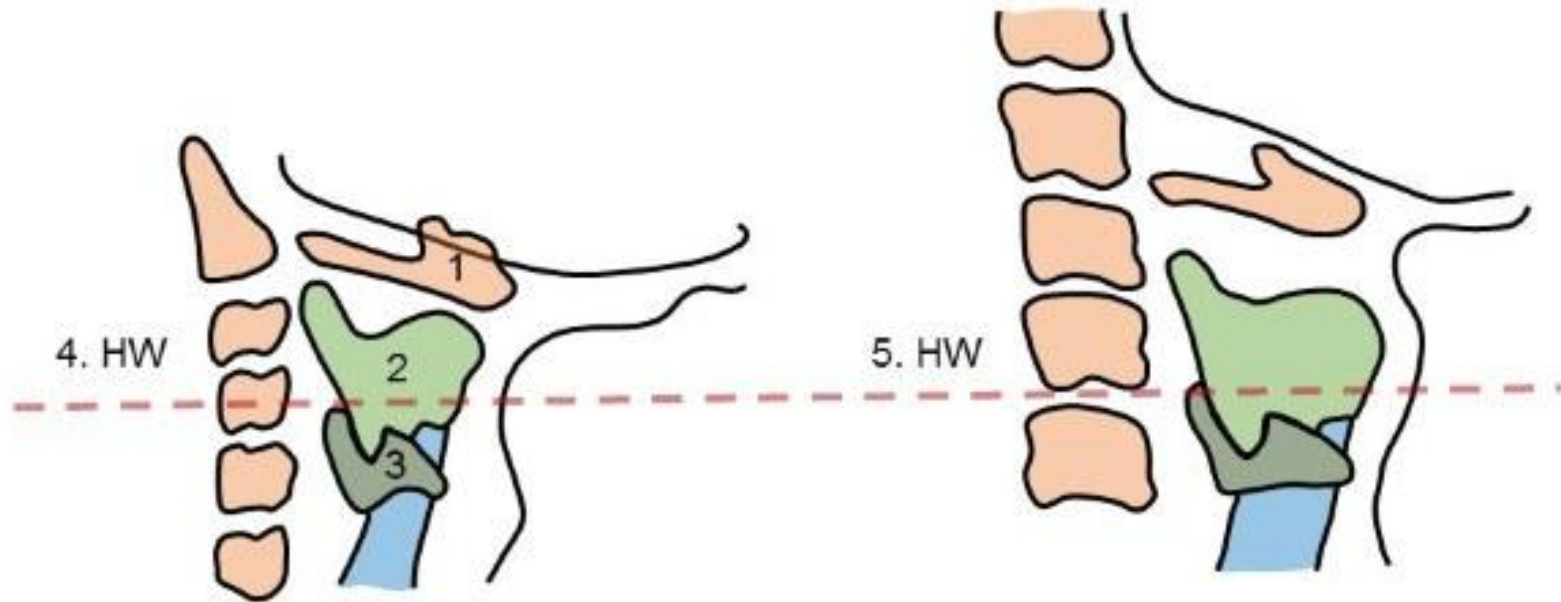
SCHLUCKAKT



STELLE DES KEHLKOPFEINGANGES

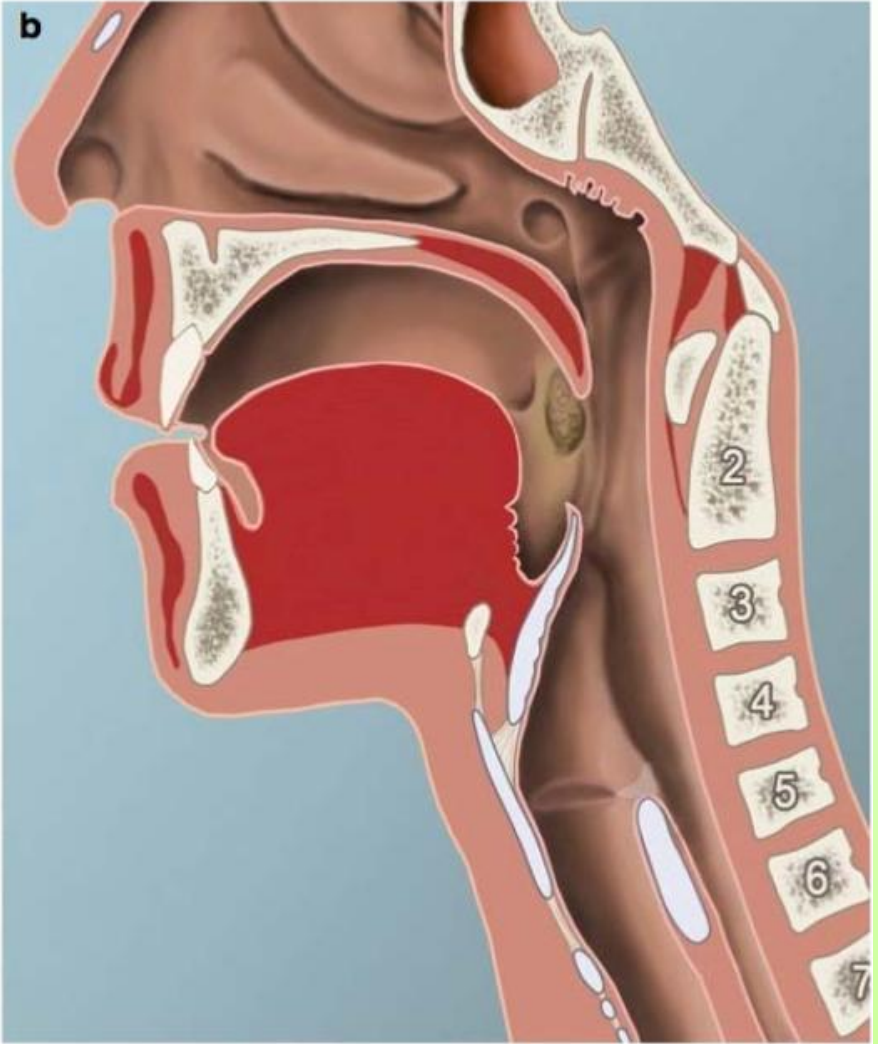
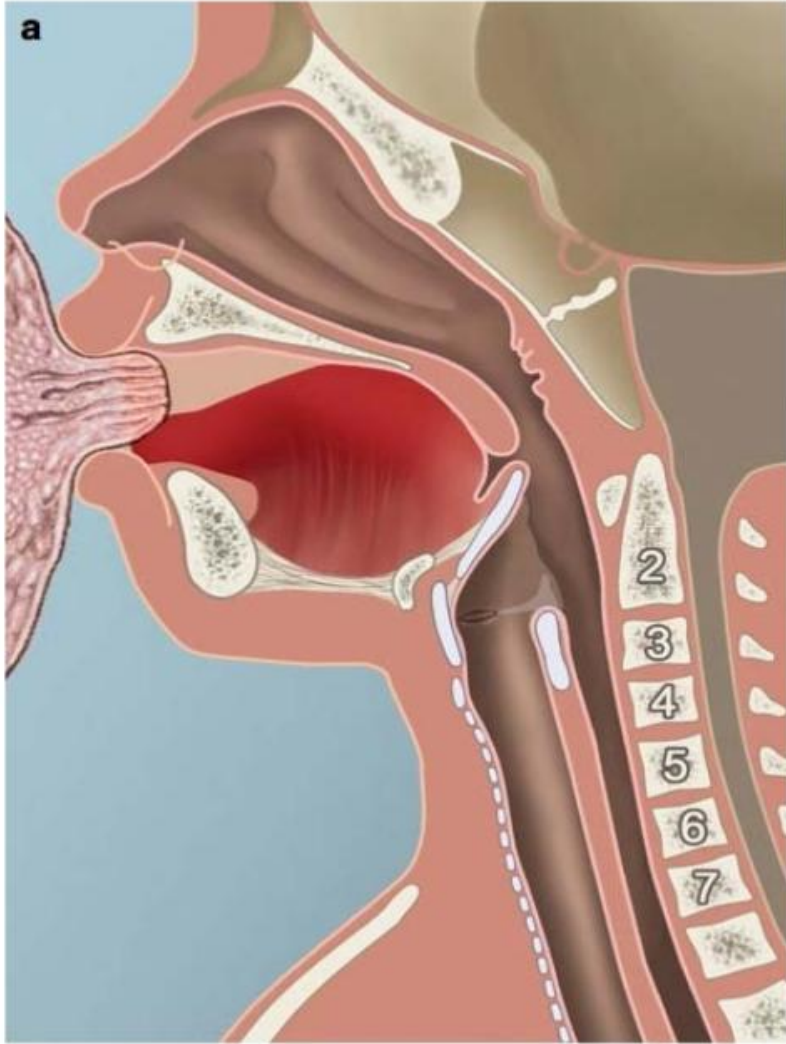
Kind

Erwachsener

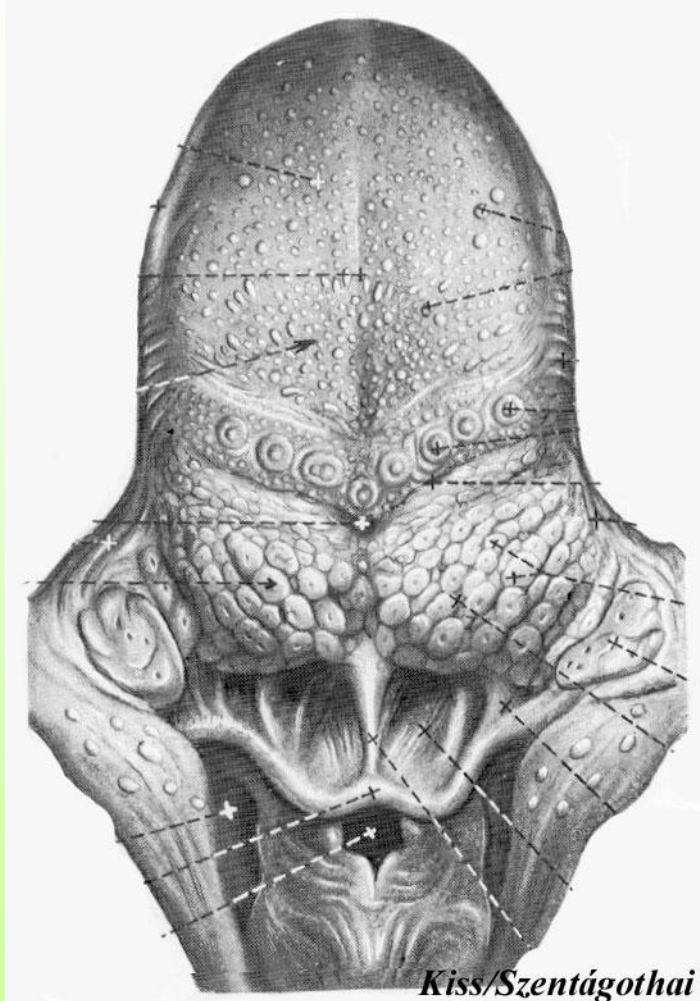


- 1 = Zungenbein
- 2 = Schildknorpel
- 3 = Ringknorpel

STELLE DES KEHLKOPFEINGANGES



ISTHMUS FAUCIUM KEHLDECKEL



EPIGLOTTIS

Plicae glossoepiglotticae

Valleculae epiglotticae

RECESSUS PIRIFORMIS

Plica nervi laryngei

ADITUS LARYNGIS

Plicae aryepiglotticae

Tuberculum cuneiforme (Wrisberg)

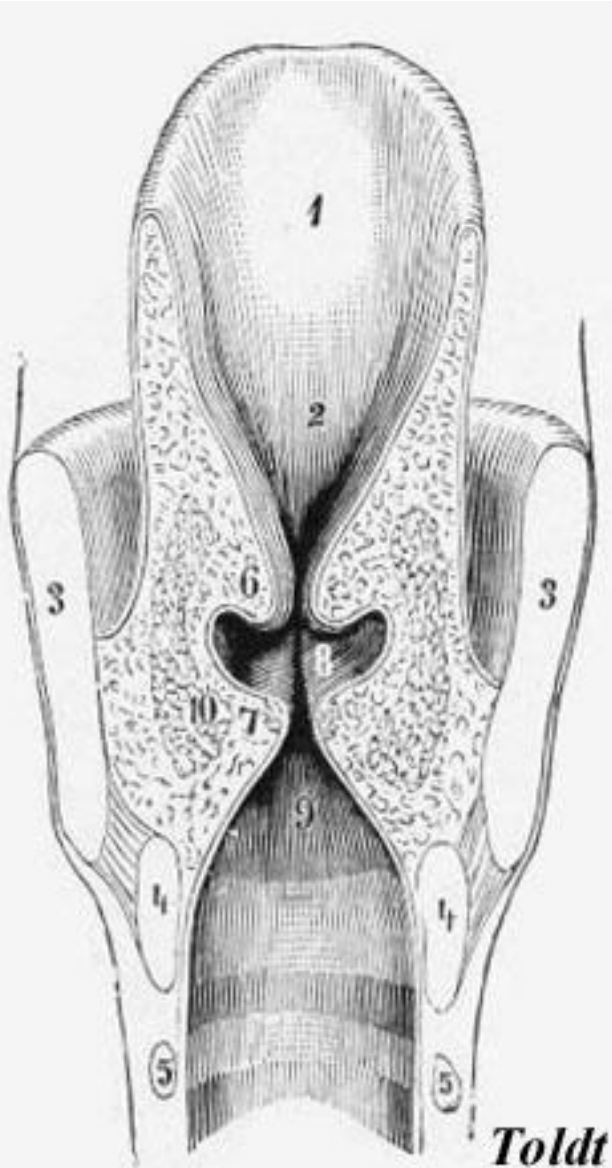
Tuberculum corniculatum (Santorinus)

Incisura interarytenoidea

Mehrsch. unverh. Plattenepithel vs. Flimmerepithel

GLOTTIS

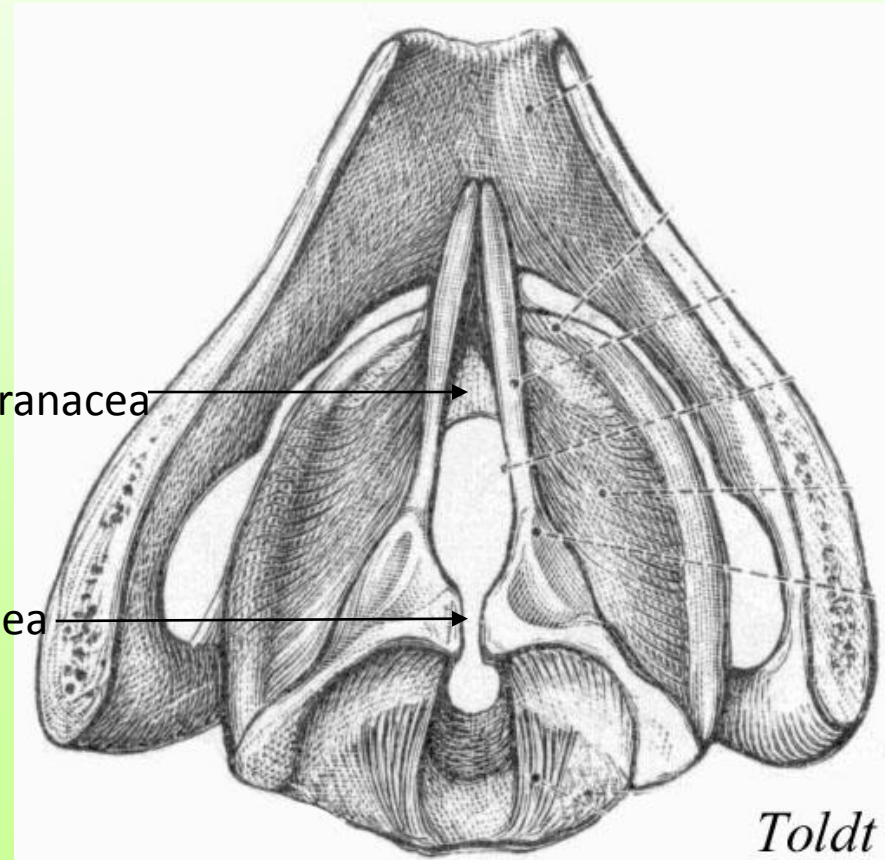
DIE STIMMRITZE BEGRENZENDE WANDTEILE DES KEHLKOPFES



Rima glottidis
2-2,5 cm lang
0,5-1,5 cm weit

Pars intermembranacea

Pars intercartilaginea



Toldt

STIMMBILDUNG

Primärer Stimmklang

- entsteht durch Schwellungen der Stimmfalten
- Bewegungen der unteren und oberen Teile
- Schwingungsfrequenz: Tonhöhe
- Grobeinstellung (M. cricothyroideus)
- Feineinstellung (M. vocalis)
- Tiefe Töne: Stimmlippen dick, abgerundet, mäßig gespannt
- Hohe Töne: dünn, schmal, stärker gespannt

Sekundärer Stimmklang

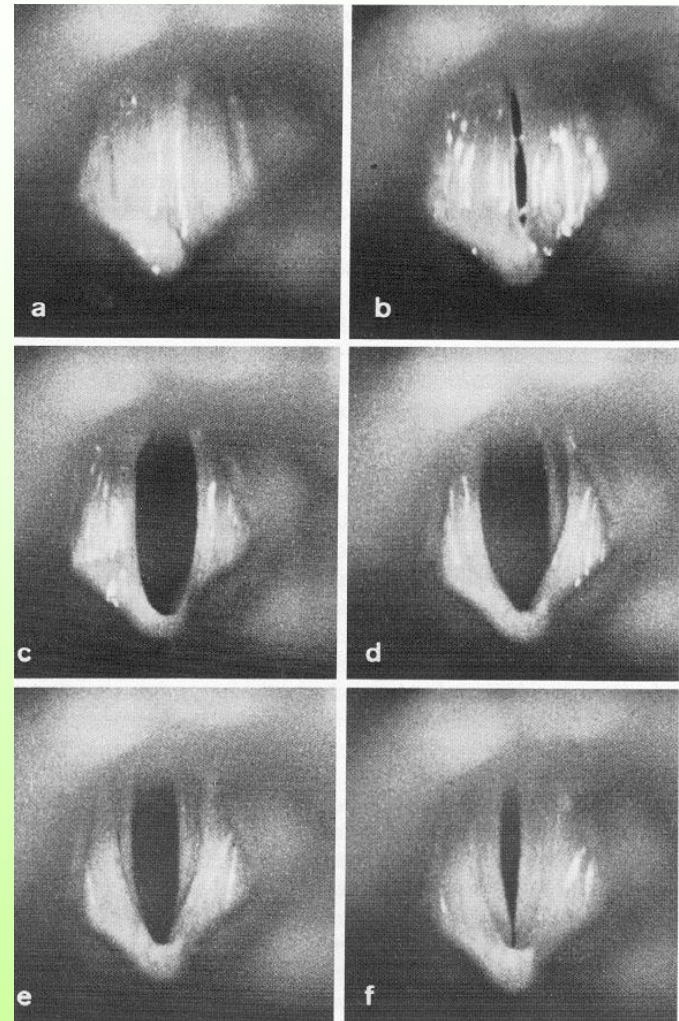
- erzeugt im "Ansatzrohr" - Resonatoren
- Höhlen von Rachen, Mund, Nase
- Verschuß von Teilen des Ansatzrohres (Schnupfen)

Sprache
Sprechwerkzeuge

Rülpssprache

nach Entfernung der Stimmfalten

VIDEO ANSCHAUEN https://www.youtube.com/watch?v=Aoa_N1vQS4M



INNERVATION

N. laryngeus superior (X.)

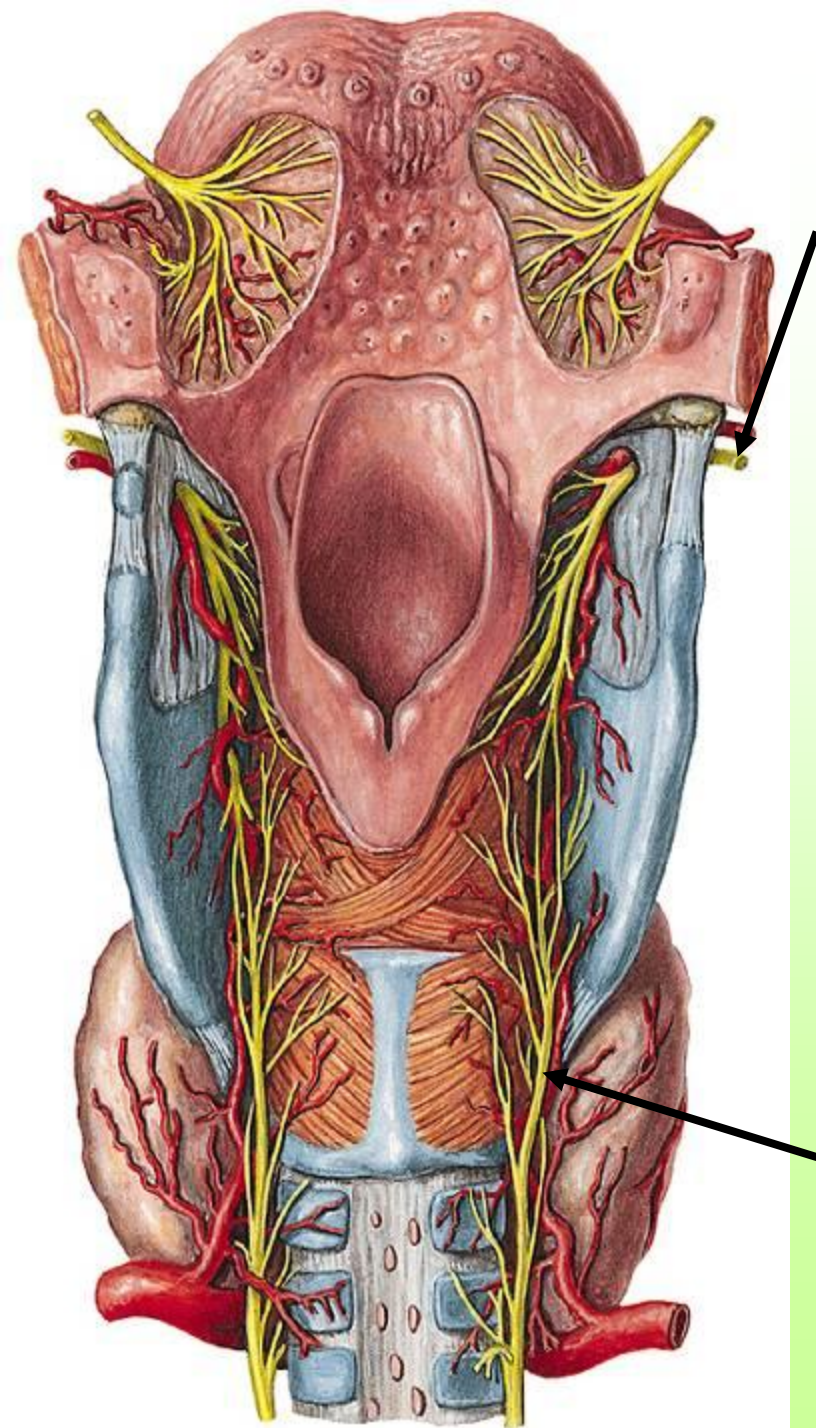
- m. cricothyroideus
- Schleimhaut über der Stimmritze

A. laryngea superior.

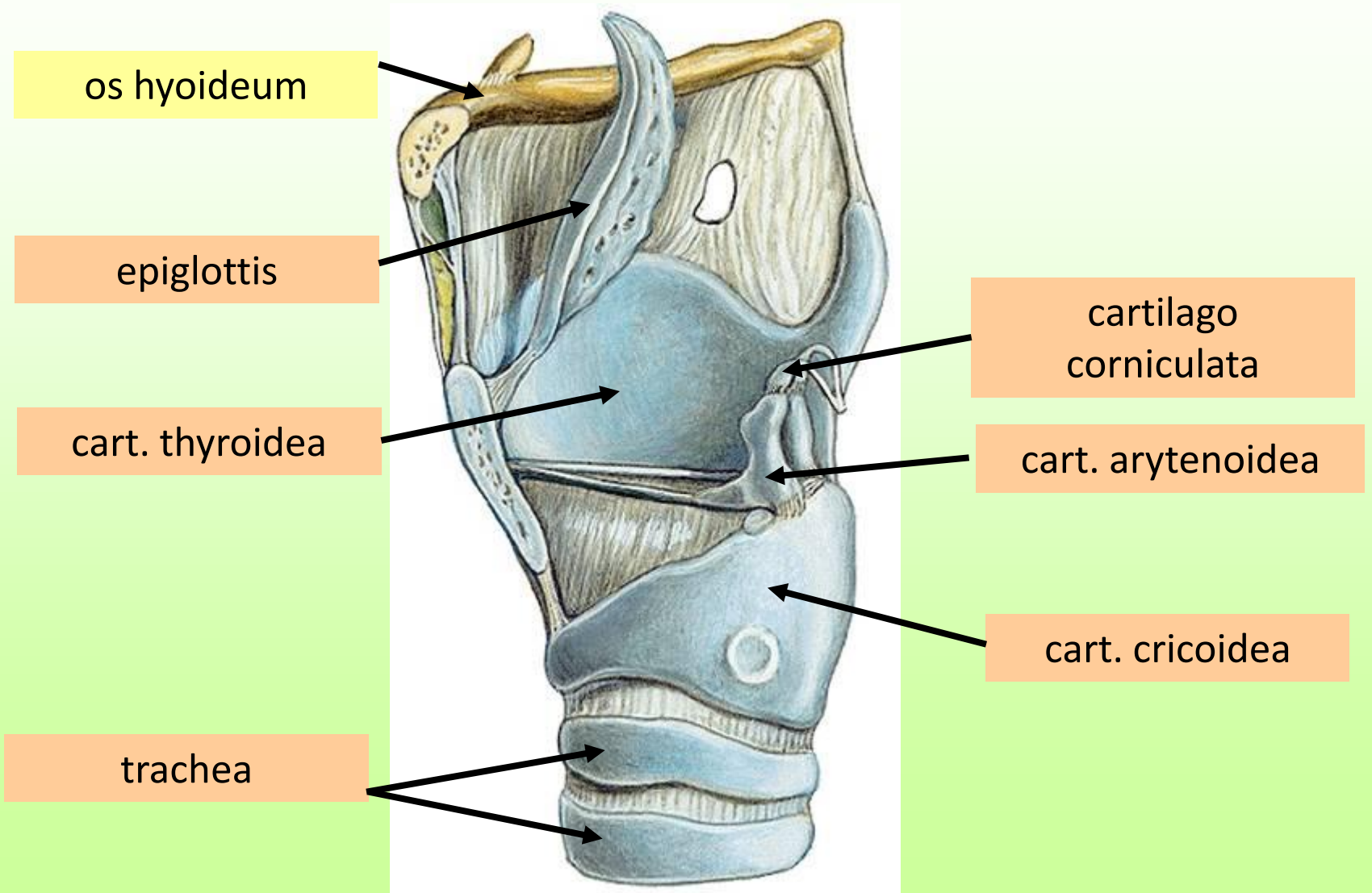
(aus der A. thyroidea sup)

N. laryngeus inferior (recurrens) (X.)

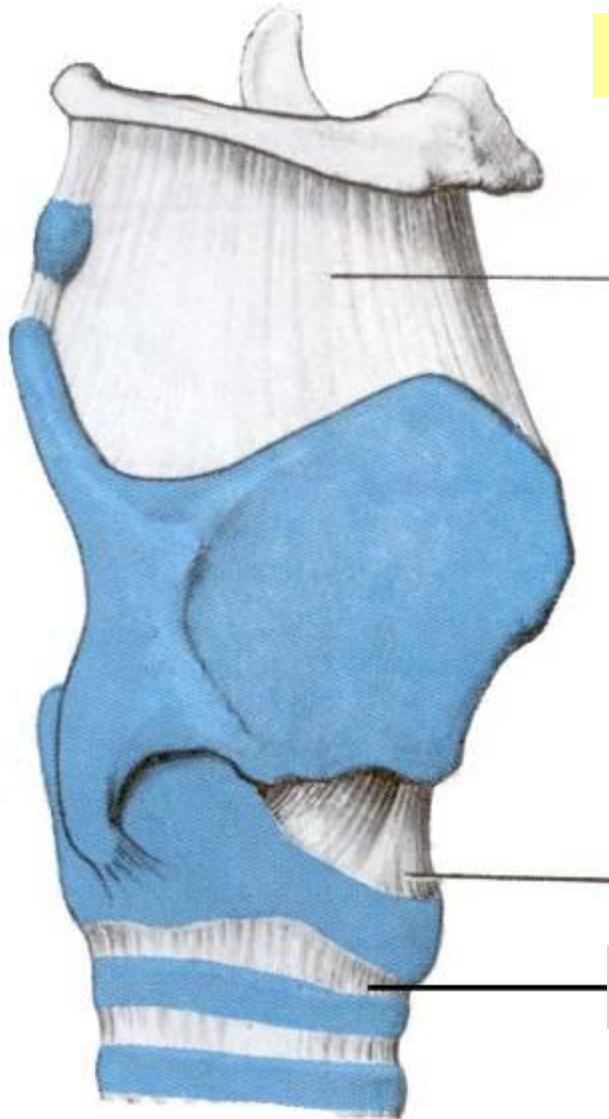
- alle inneren Muskeln
- Schleimhaut unter der Stimmritze



KEHLKOPFKNORPELN



MEMBRANEN UND BÄNDER

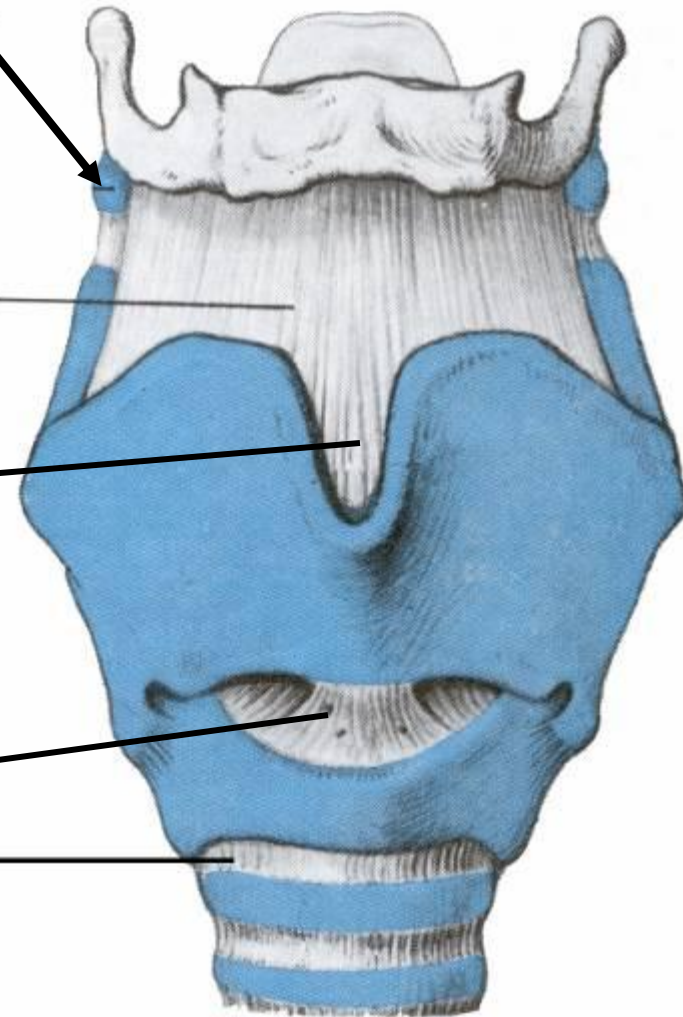


Cartilago triticea

Membrana
thyrohyoidea
bzw. Lig. Thyrohyoideum
medianum und laterale

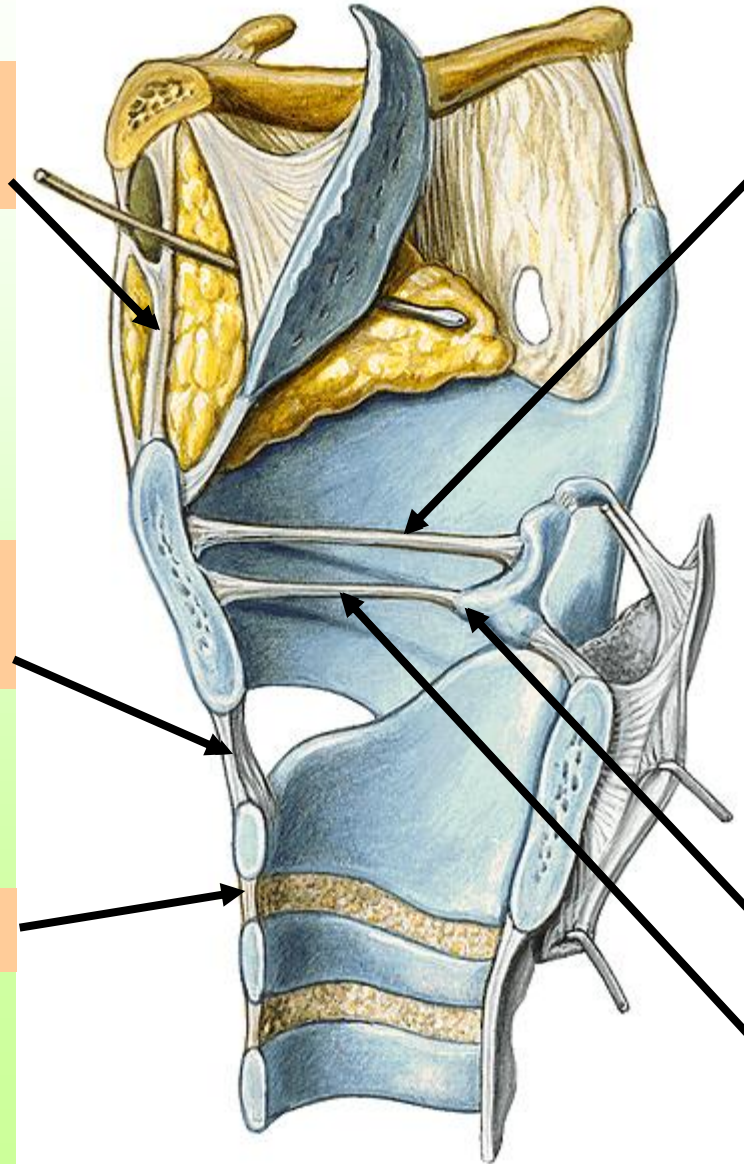
Lig. cricothyroideum
(Lig. conicum)
Conicotomia

Lig. cricotracheale



LIGAMENTUM VOCALE

Membrana
thyrohyoidea



Lig. vestibulare

Lig. cricothyroideum
(Lig. conicum)

Lig. cricotracheale

Processus vocalis

Lig. vocale

ADITUS LARYNGIS

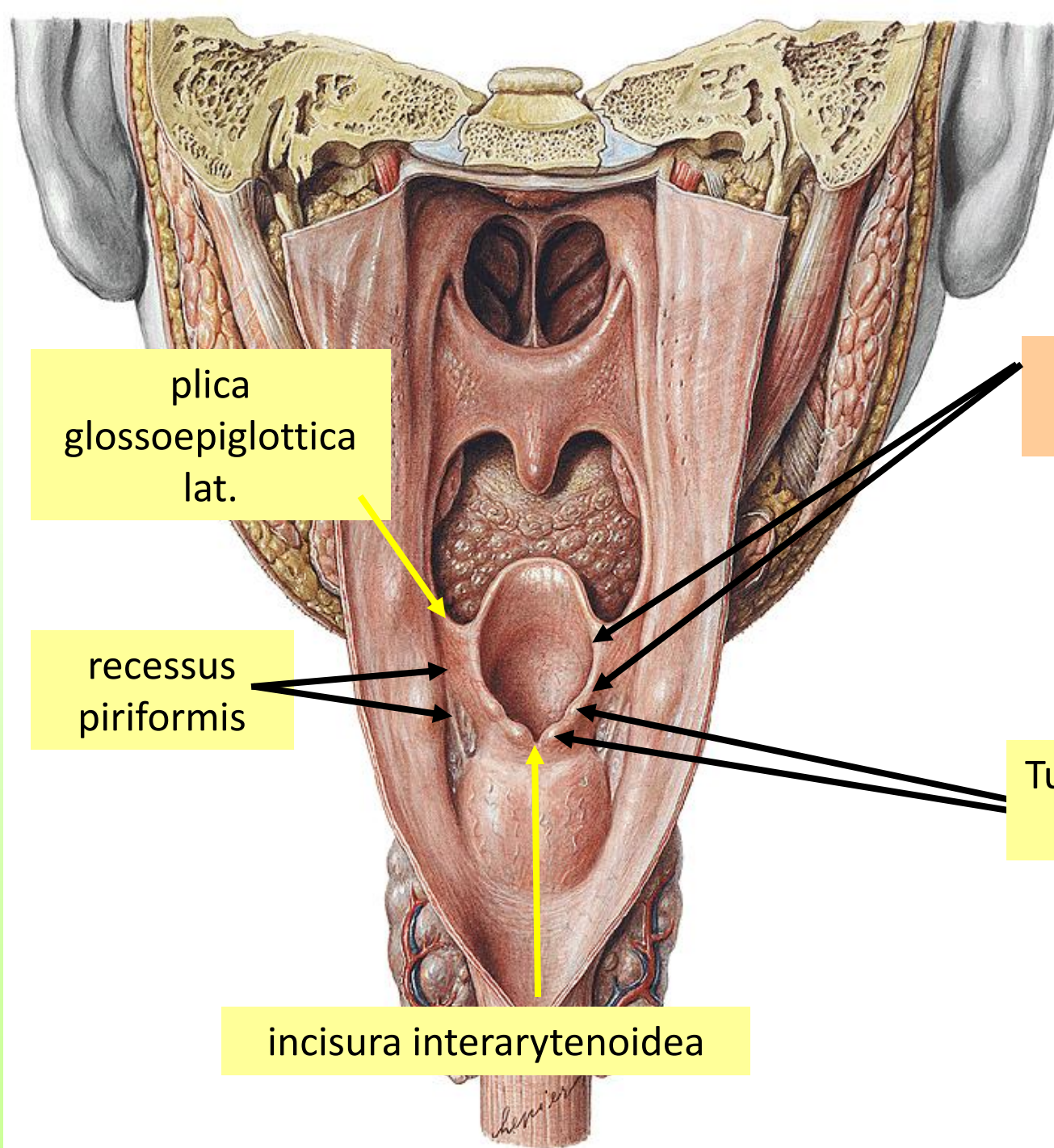
plica
glossoepiglottica
lat.

plica
aryepiglottica

recessus
piriformis

Tuberculum corniculatum
et cuneiforme

incisura interarytenoidea



MEMBRANA FIBRO-ELASTICA LARYNGIS

Epiglottis

Membrana
quadrangularis

Plica vestibularis

Plica vocalis

Membrana
triangularis

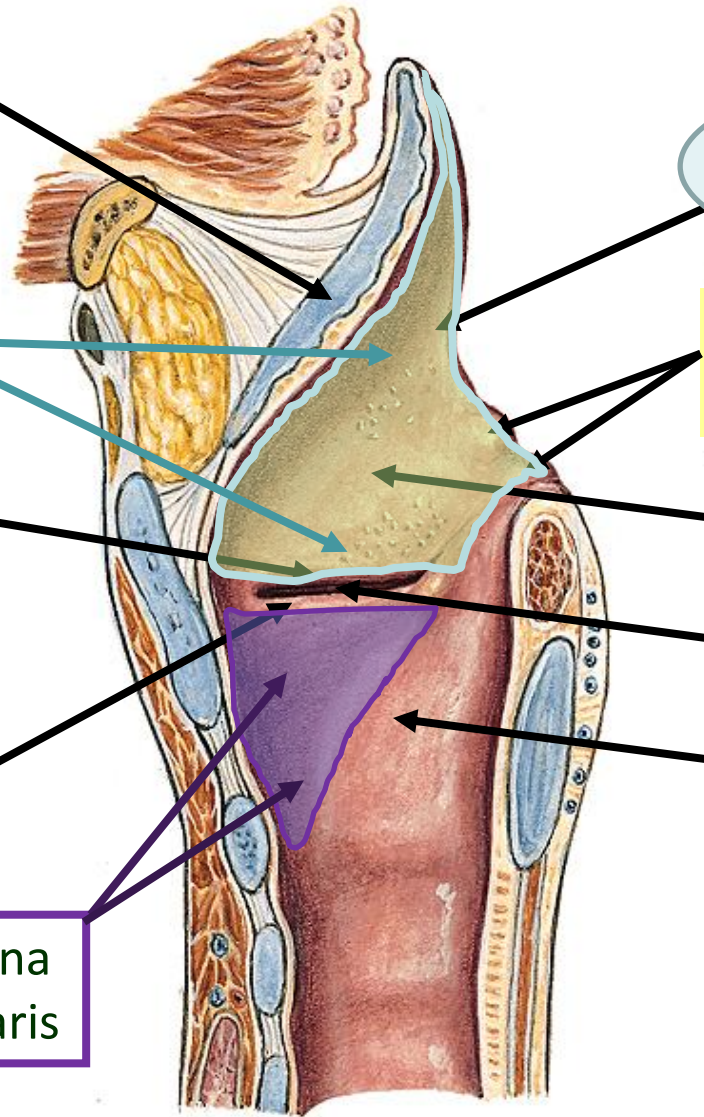
Plica
aryepiglottica

Tuberculum corniculatum
et cuneiforme

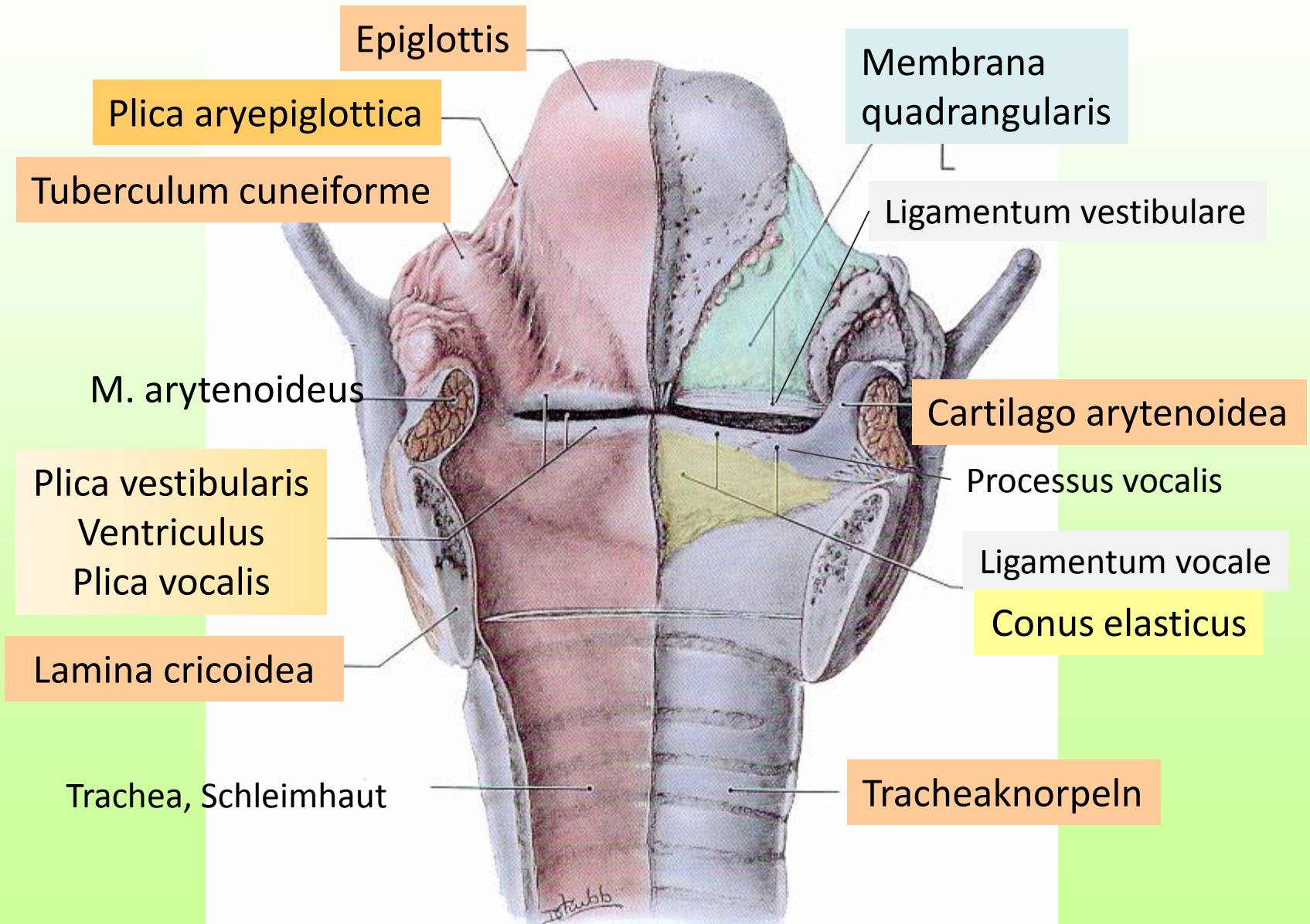
Vestibulum laryngis

Ventriculus laryngis

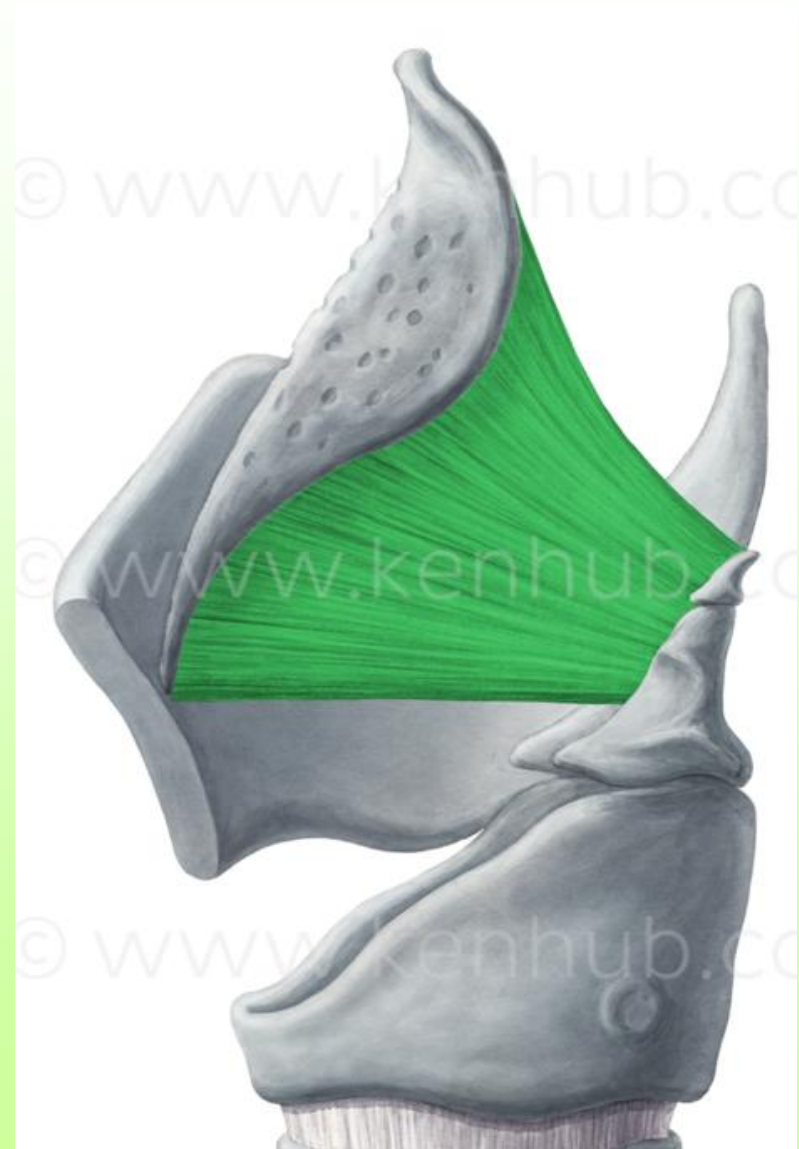
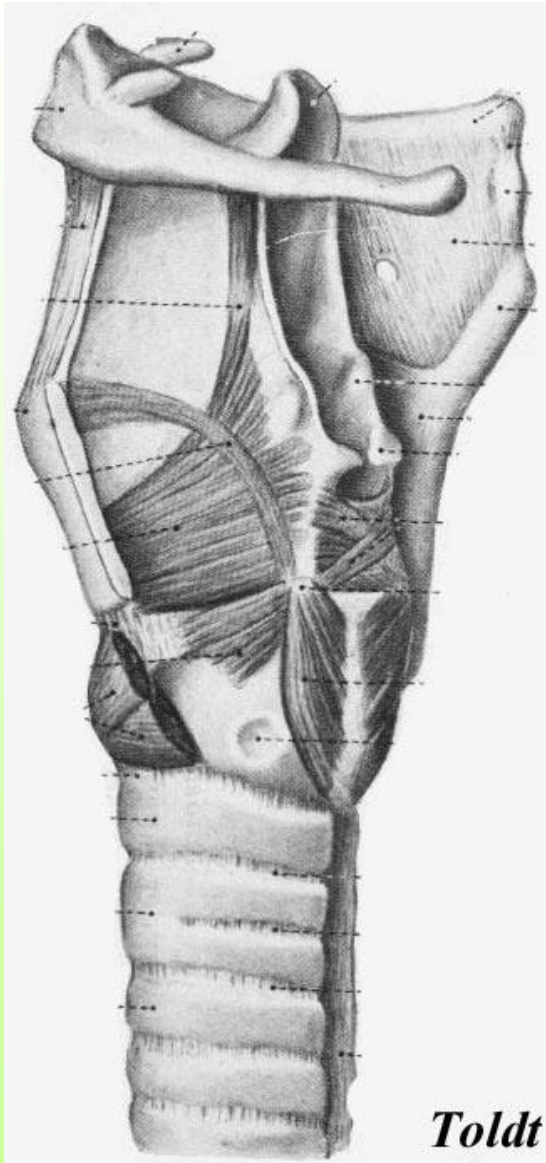
Cavum subglotticum



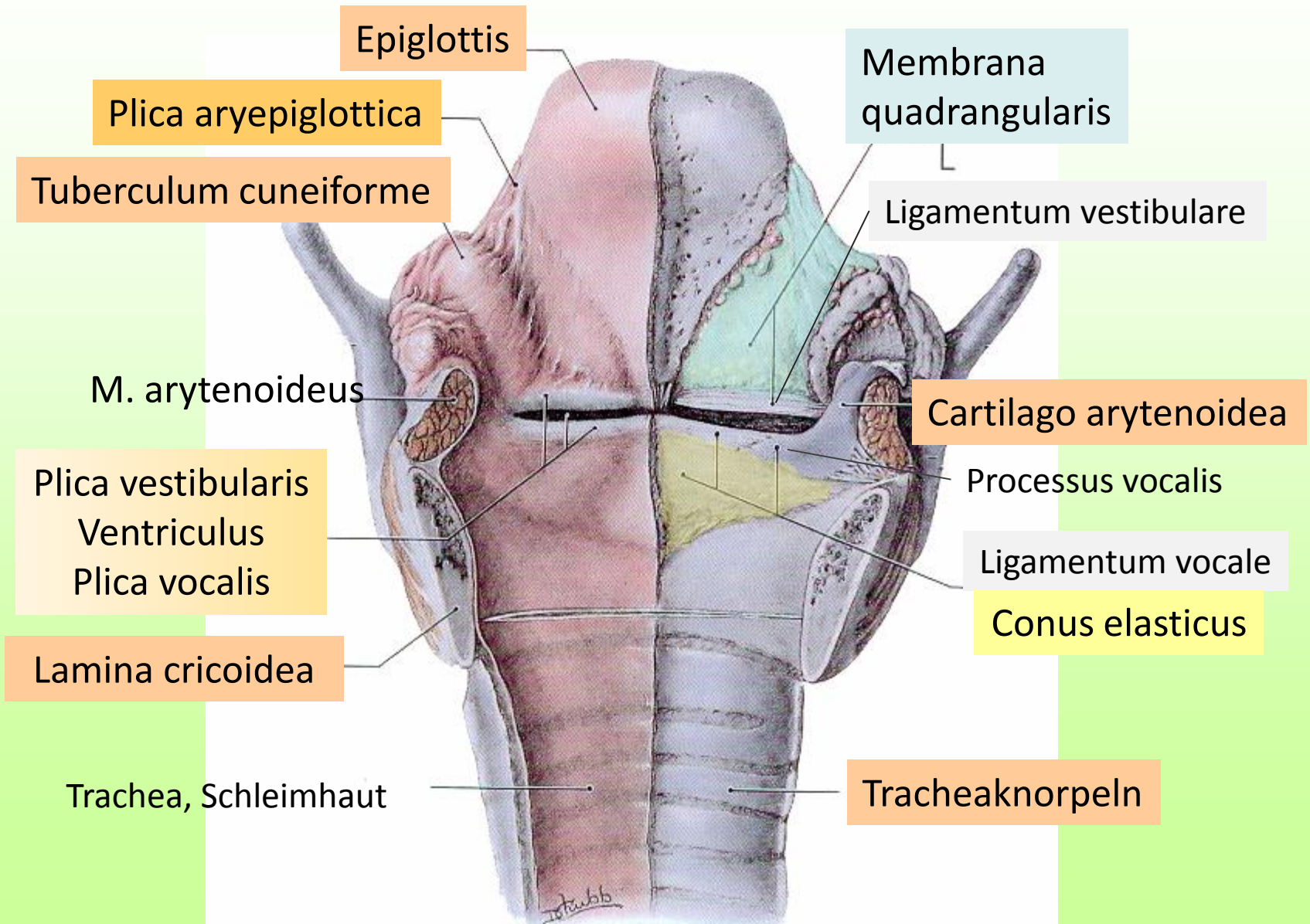
MEMBRANA FIBRO-ELASTICA LARYNGIS



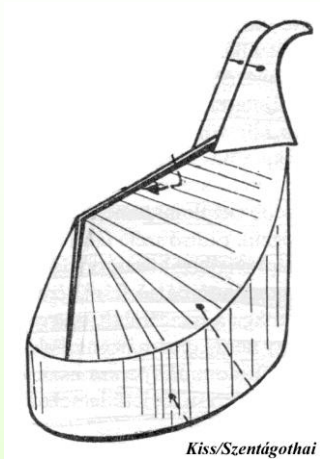
MEMBRANA QUADRANGULARIS



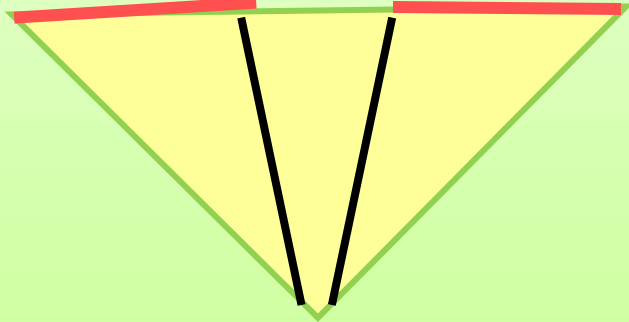
MEMBRANA FIBRO-ELASTICA LARYNGIS



CONUS ELASTICUS



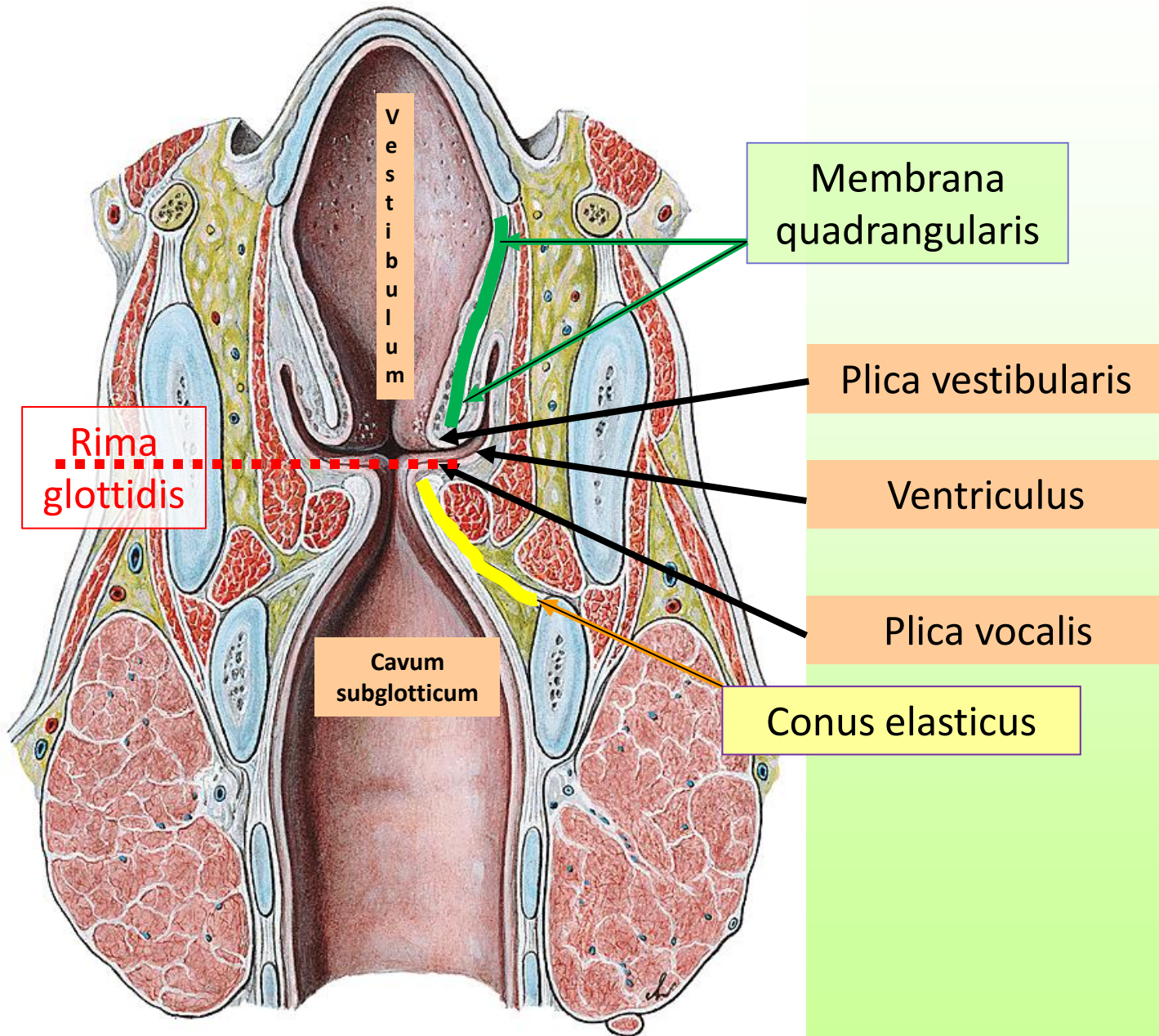
Ligamentum vocale



Membrana triangularis

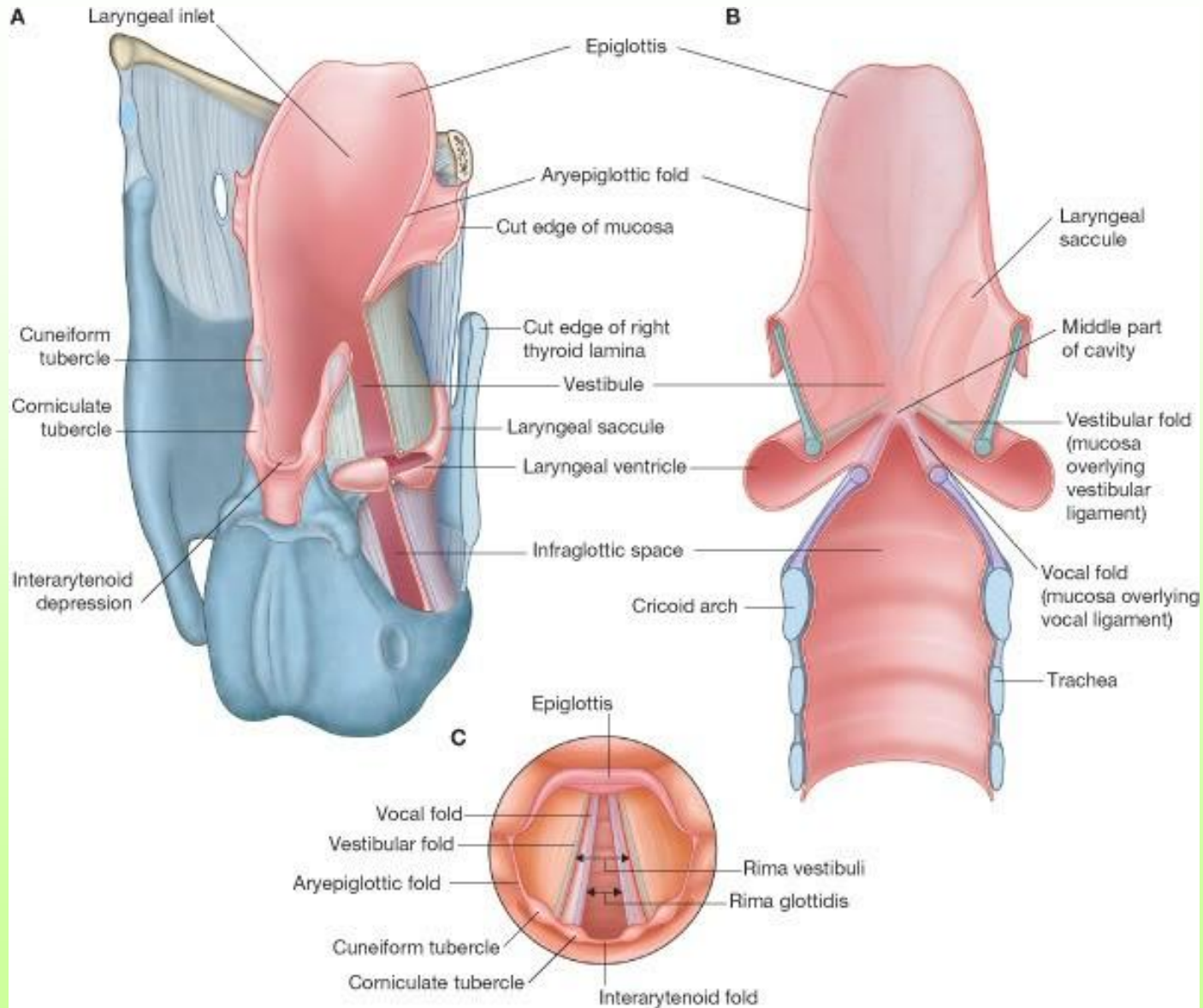


SCHLEIMHAUTRELIEF



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DIE KEHLKOPFSCHLEIMHAUT



FEINBAU DES KEHLKOPFES

Vestibulum laryngis
Respirationsepithel
lockeres Bindegewebe (Glottis ödem)
seromuköse Drüsen
Membrana quadrangularis

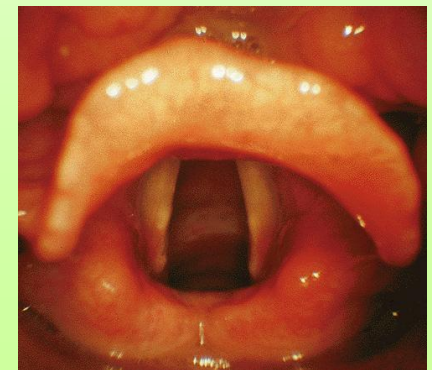
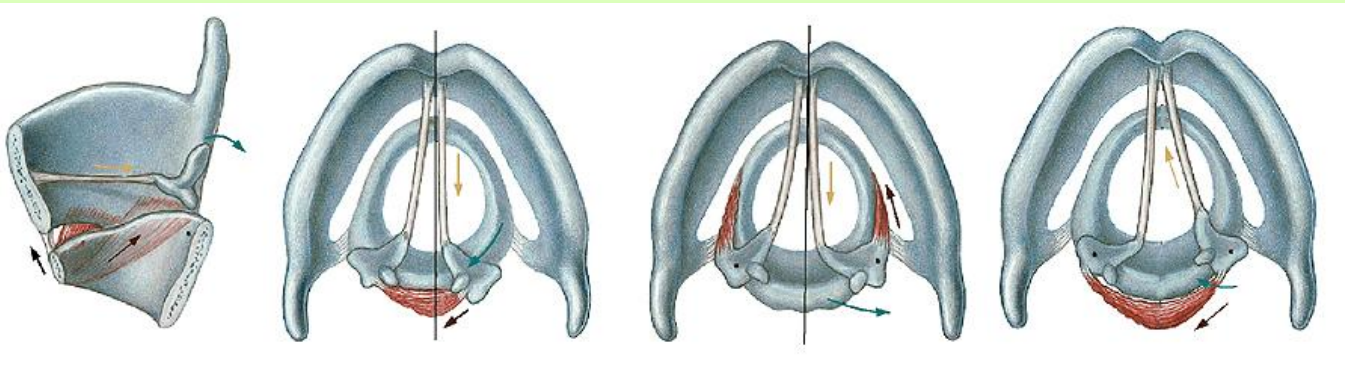
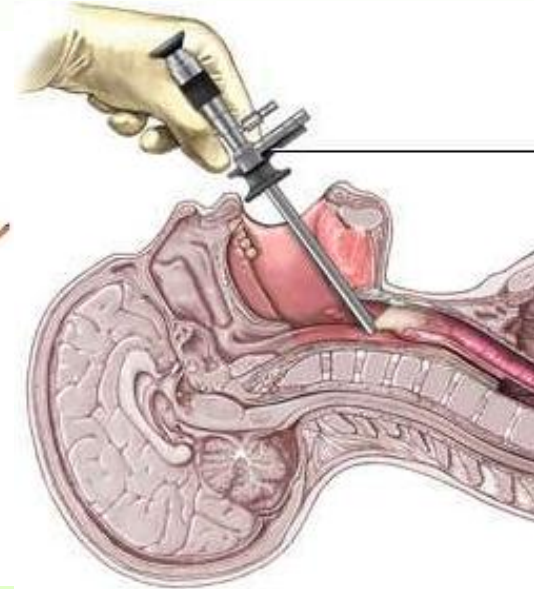
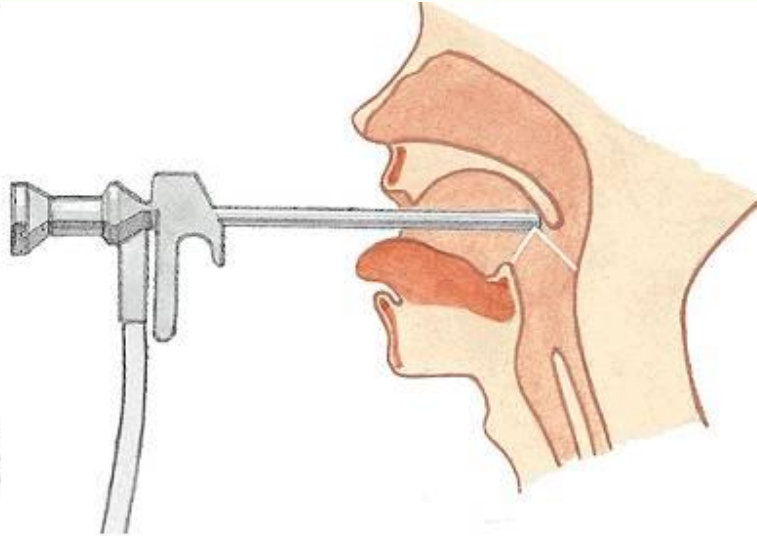
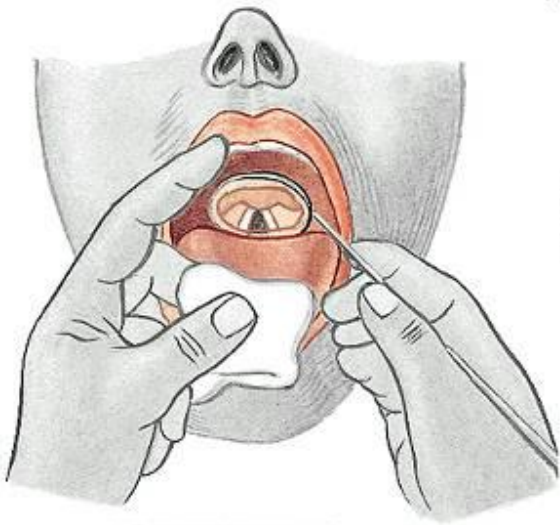
An den Stimmfalten
Mehrsch. unverhorn. Plattenepithel
Bindegewebe mit Stimmfalten fest verwachsen
keine Drüsen
mächtige Muskulatur (M. vocalis)
Membrana triangularis



Sacculus laryngis
(Kehlkopfsäckchen-
Homolog,
Schallverstärker)

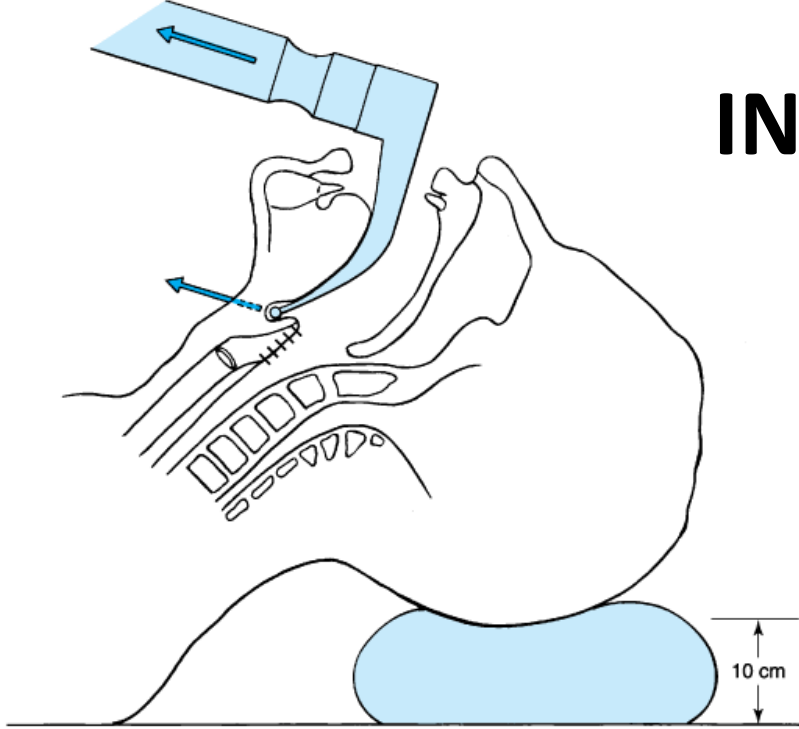
Toldt

LARYNGOSKOPIE

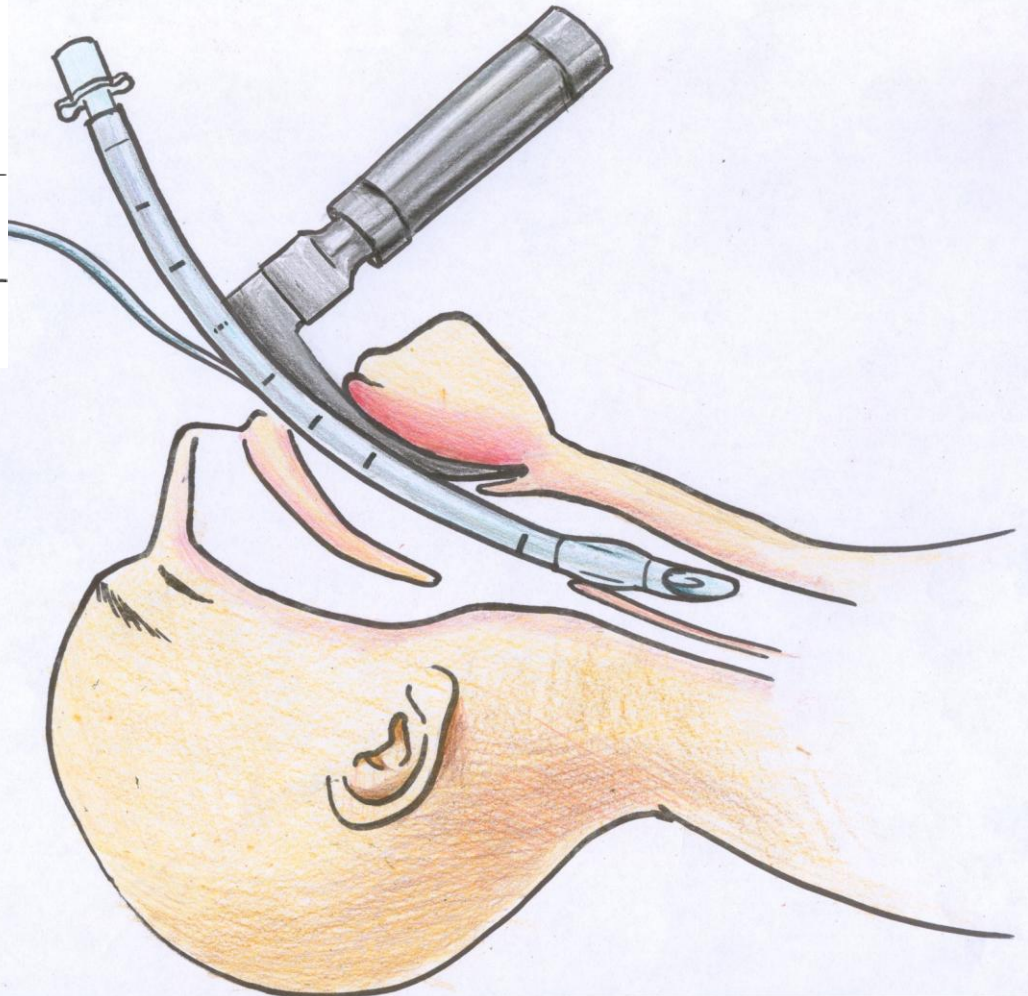


<https://www.youtube.com/watch?v=43Akm52SSvA>

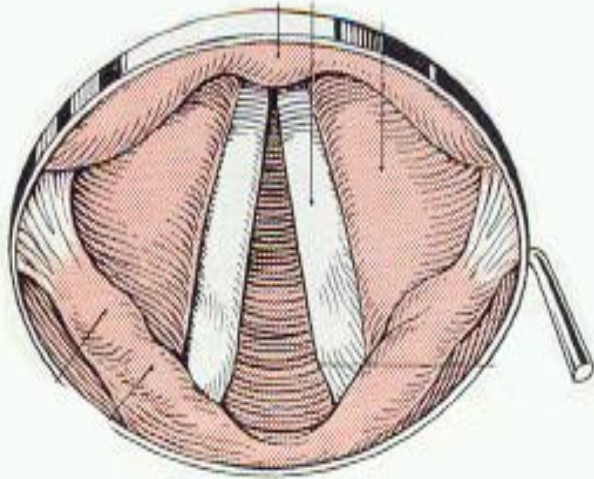
INTUBATIO



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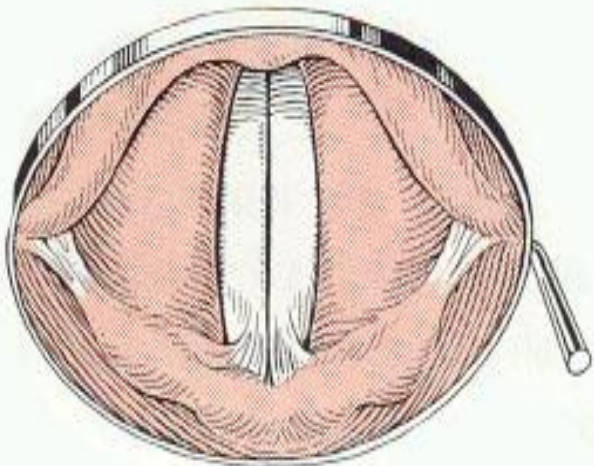
KEHLKOPFSPIEGELUNG



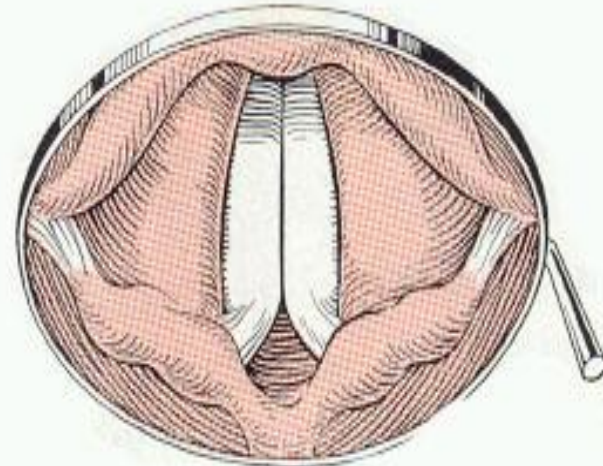
mittlere Atemstellung



verstärkte Atmung

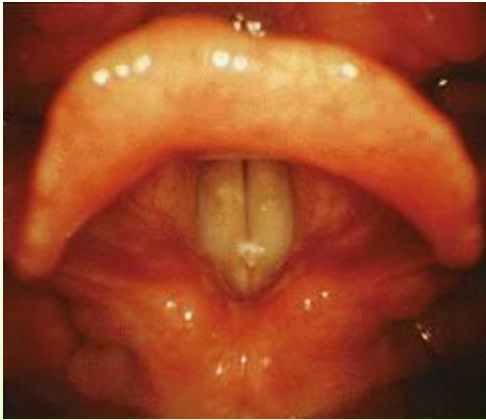


Phonationsstellung (Glottisschluß)

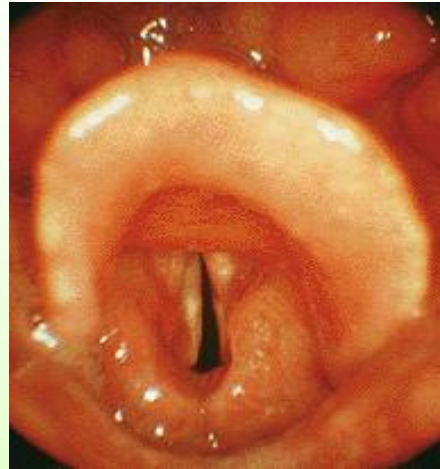


Flüstersprache

KEHLKOPFSPIEGELUNG



Normales Sprechen
rima glottidis ist zu



Flüstern



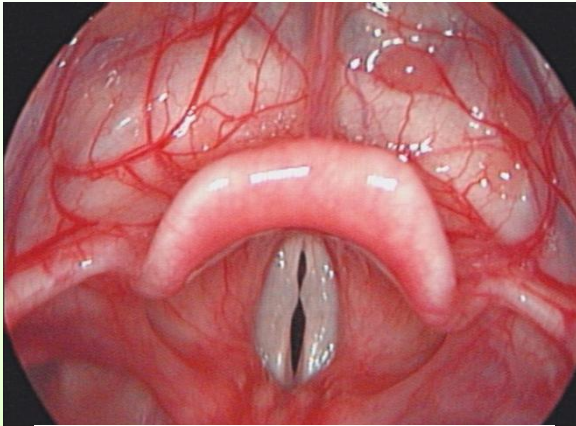
Maximale Einatmung
rima glottidis ist auf



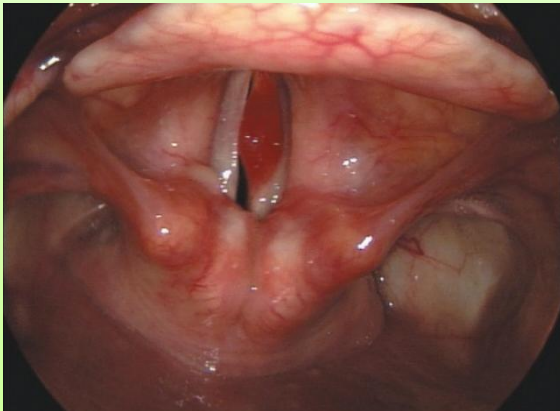
Phonationsstellung

KEHLKOPFSPIEGELUNG

Pathologie



Sängerknoten = Fibroma



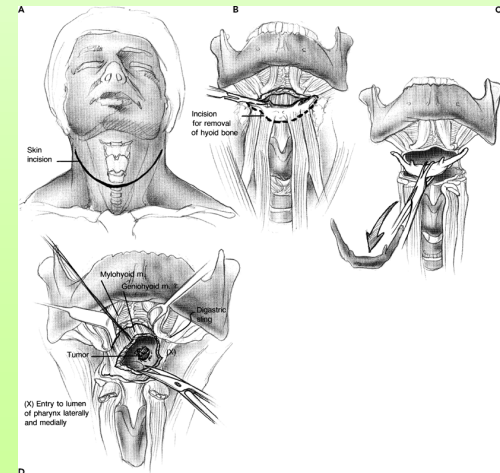
Polypus



Reinke Ödem

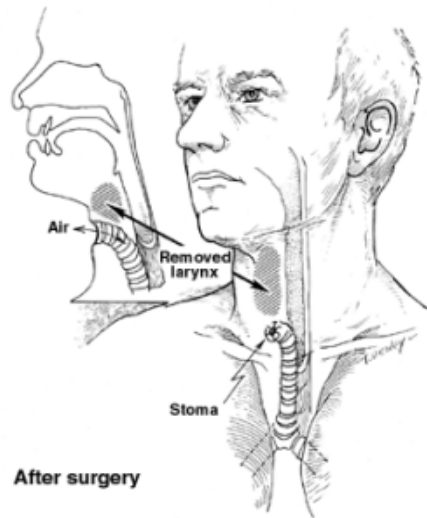
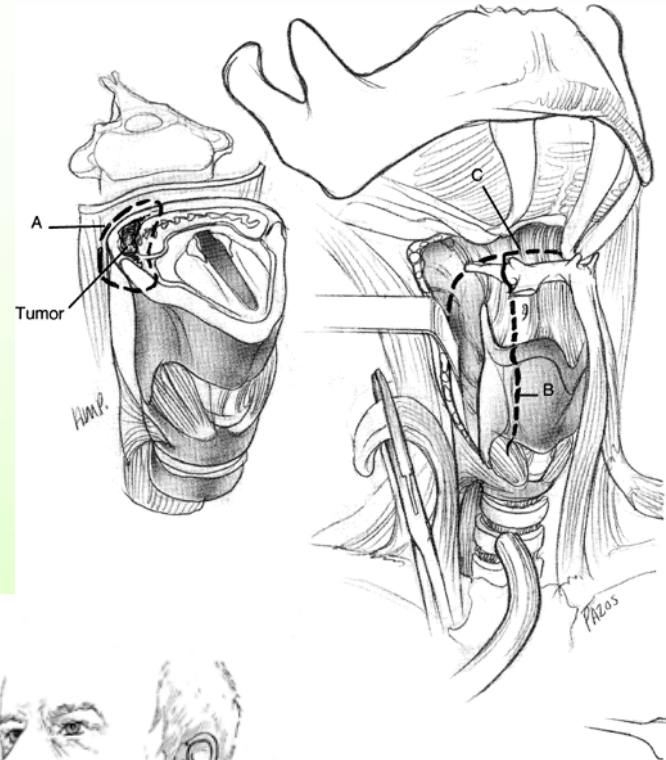
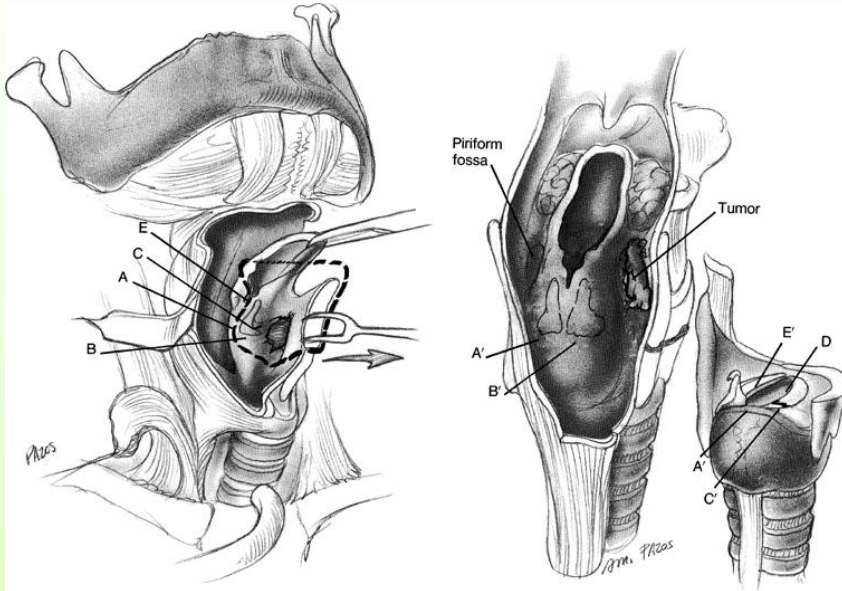


Kehlkopfkarzinom



KEHLKOPFENTFERNUNG

Kehlkopfkarzinom



Danke für Ihre Aufmerksamkeit!

<https://www.youtube.com/watch?v=-XGds2GAvGQ>